• • • • • • • • • • • • • • • • • • •		P	1/09
Numbor:O	Errors Corrected by the S 9/837,58/ e from non-ASCII to ASCII	TIC oms Branch  CRF Procossing Da  Edited by:	10: 7/19/2
	e from non-ASCII to ASCII	EREBOIL BY:	(ST
Changed the	margins in cases where the sequence text	vas 'wrapped' down to the next l	line. Bl
Edited a forma	at error in the Current Application Data sect	on, specifically:	
	rrent Application Data section with the actual the prior application data; or other	d current number. The number in	oputted by th
Added the ma	ndatory heading and subheadings for *Cum	ent Application Data*.	
Edited the "Nu	umber of Sequences' field. The applicant sp	celled out a number instead of us	ing an integ
Changed the s	spelling of a mandatory field (the headings of	r subheadings), specifically:	
Corrected the	SEQ ID NO when obviously incorrect. The	sequence numbers Ihal were edi	ted were:
	rected a nucleic number at the end of a nuc	laid line SEO ID NO's aditad:	
Corrected subh	neading placement. All responses must be ad a response below the subheading, this wa	on the same line as each subhea	ding. If the
Corrected subhapplicant place	neading placement. All responses must be	on the same line as each subhea as moved to its appropriate place lited included:	ding. If the
Corrected subhapplicant place Inserted colons Deleted extra,	neading placement. All responses must be add a response below the subheading, this was alter headings/subheadings. Headings ed	on the same line as each subheats moved to its appropriate place lited included:	
Corrected subhapplicant place Inserted colons  Deleted extra, in  Deleted:	neading placement. All responses must be ad a response below the subheading, this was after headings/subheadings. Headings edinvalid, headings used by an applicant, speon-ASCII "garbage" at the beginning/end of	on the same line as each subheats moved to its appropriate place lited included:  cifically:  files:   secretary initials/filenates	
Corrected subhapplicant place Inserted colons Deleted extra, in Deleted:	neading placement. All responses must be ad a response below the subheading, this was after headings/subheadings. Headings edinvalid, headings used by an applicant, speon-ASCII "garbage" at the beginning/end of the subers throughout text;	on the same line as each subheats moved to its appropriate place lited included:  cifically:  files:   secretary initials/filenates	
Corrected subhapplicant place Inserted colons Deleted extra, Deleted:	neading placement. All responses must be ad a response below the subheading, this was after headings/subheadings. Headings edinvalid, headings used by an applicant, speron-ASCII "garbage" at the beginning/end of other sthroughout text;  other invalid text, latory headings, specifically:	on the same line as each subheats moved to its appropriate place lited included: , cifically:  files: secretary initials/filenatsuch as	
Corrected subhapplicant place Inserted colons Deleted extra, in page num Inserted manda Corrected an o	neading placement. All responses must be ad a response below the subheading, this was after headings/subheadings. Headings ed invalid, headings used by an applicant, specifically:    On-ASCII "garbage" at the beginning/end of other throughout text;	on the same line as each subheats moved to its appropriate place lited included:  cifically:  files: secretary initials/filenations as	
Corrected subhapplicant place Inserted colons Deleted extra, i Deleted extra, i page num Inserted mand Corrected an o Edited identifie	neading placement. All responses must be ad a response below the subheading, this was after headings/subheadings. Headings ed invalid, headings used by an applicant, specifically:	on the same line as each subheats moved to its appropriate place lited included:  cifically:  files;  secretary initials/filenations such as  is required, or vice versa.	me al end o
Corrected subhapplicant placed Inserted colons Deleted extra, in page num Inserted mand. Corrected an or Edited identified Corrected an or A "Hard Page Edited ending	neading placement. All responses must be ad a response below the subheading, this was after headings/subheadings. Headings ed invalid, headings used by an applicant, specifically and applicant that the beginning/end of other sthroughout text; other invalid text, alterny headings, specifically:  Obvious error in the response, specifically:  Or where upper case is used but lower case arror in the Number of Sequences field, specifically.	on the same line as each subheats moved to its appropriate place lited included:  cifically:  files; secretary initials/filenations such as  is required, or vice versa.  ifically:  All occurrences had to be deleted djusted the *(A)Length:* field according to the secretary initials/filenations are considered to be deleted djusted the *(A)Length:* field according to the secretary initials/filenations are considered to the secretary are considered to the secreta	me al end o

\*Examiner: The above corrections must be communicated to the applicant in the first Office Action. DO NOT send a copy of this form.

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/857,581

DATE: 07/19/2001 TIME: 08:11:10

Input Set : A:\Pto.amc

Output Set: N:\CRF3\07192001\I857581.raw



- 3 <110> APPLICANT: E. I. du Pont de Nemours and Company
- 5 <120> TITLE OF INVENTION: Nucleic Acid Sequences Encoding Isoflavone Synthase
- 7 <130> FILE REFERENCE: BB1339 PCT
- C--> 9 <140> CURRENT APPLICATION NUMBER: US/09/857,581
- C--> 10 <141> CURRENT FILING DATE: 2001-06-05
  - 12 <150> PRIOR APPLICATION NUMBER: 60/117,769
  - 13 <151> PRIOR FILING DATE: 1999-01-27
  - 15 <150> PRIOR APPLICATION NUMBER: 60/144,783
  - 16 <151> PRIOR FILING DATE: 1999-07-20
  - 18 <150> PRIOR APPLICATION NUMBER: 60/156,094
  - 19 <151> PRIOR FILING DATE: 1999-09-24
  - 21 <160> NUMBER OF SEQ ID NOS: 66
  - 23 <170> SOFTWARE: Microsoft Office 97
  - 25 <210> SEQ ID NO: 1
  - 26 <211> LENGTH: 1756
  - 27 <212> TYPE: DNA
  - 28 <213> ORGANISM: Glycine max
  - 30 <400> SEQUENCE: 1
  - 31 gtaattaacc tcactcaaac tcgggatcac agaaaccaac aacagttctt gcactgaggt 60 32 ttcacgatgt tgctggaact tgcacttggt ttgtttgtgt tagctttgtt tctgcacttg 120

  - 33 cgtcccacac caagtgcaaa atcaaaagca cttcgccacc tcccaaaccc tccaagccca
  - 34 aagcctcqtc ttcccttcat tqqccacctt cacctcttaa aagataaact tctccactat 240 35 gcactcatcg atctctccaa aaagcatggc cccttattct ctctctcctt cggctccatg 300
  - 36 ccaaccgtcg ttgcctccac ccctgagttg ttcaagctct tcctccaaac ccacgaggca
  - 37 acttecttea acacaaggtt ceaaacetet gecataagae geeteaetta egacaactet 420
  - 38 qtqqccatqq ttccattcqq accttactqq aaqttcqtqa qqaaqctcat catgaacgac 480
  - 39 cttctcaacg ccaccaccgt caacaagctc aggcctttga ggacccaaca gatccgcaag 540
  - 40 tteettaggg ttatggeeca aagegeagag geecagaage eeettgaegt eacegaggag 600
  - 41 cttctcaaat ggaccaacag caccatctcc atgatgatgc tcggcgaggc tgaggagatc 660
  - 42 agagacateg etegegaggt tettaagate tteggegaat acageeteae tgaetteate 720 43 tggcctttga agtatctcaa ggttggaaag tatgagaaga ggattgatga catcttgaac
  - 44 aagttcgacc ctgtcgttga aagggtcatc aagaagcgcc gtgagatcgt cagaaggaga
  - 45 aagaacggag aagttgttga gggcgaggcc agcggcgtct tcctcgacac tttgcttgaa
  - 46 ttcgctgagg acgagaccat ggagatcaaa attaccaagg agcaaatcaa gggccttgtt

  - 47 gtcgactttt tctctgcagg gacagattcc acagcggtgg caacagagtg ggcattggca 1020
  - 48 gageteatea acaateeeag ggtgttgeaa aaggetegtg aggaggteta eagtgttgtg 1080 49 qqcaaaqata qactcqttqa cqaaqttqac actcaaaacc ttccttacat taggqccatt 1140

  - 50 gtgaaggaga cattccgaat gcacccacca ctcccagtgg tcaaaagaaa gtgcacagaa 1200
  - 51 gagtgtgaga ttaatgggta tgtgatccca gagggagcat tggttctttt caatgtttgg 1260
  - 52 caagtaggaa gggaccccaa atactgggac agaccatcag aattccgtcc cgagaggttc 1320
  - 53 ttagaaactg gtgctgaagg ggaagcaggg cctcttgatc ttaggggcca gcatttccaa 1380
  - 54 ctcctcccat ttgggtctgg gaggagaatg tgccctggtg tcaatttggc tacttcagga 1440
  - 55 atggcaacac ttcttgcatc tcttatccaa tgctttgacc tgcaagtgct gggccctcaa 1500
  - 56 qqacaaatat tqaaagqtga tgatgccaaa gttagcatgg aagagagagc tggcctcaca 1560 57 gttccaaggg cacatagtct cgtttgtgtt ccacttgcaa ggatcggcgt tgcatctaaa 1620
  - 58 ctcctttctt aattaagata atcatcatat acaatagtag tgtcttgcca tcgcagttgc 1680
  - 59 tttttatqta ttcataatca tcatttcaat aaggtgtgac tggtacttaa tcaagtaatt 1740

Input Set : A:\Pto.amc

Output Set: N:\CRF3\07192001\1857581.raw

```
1756
60 aaggttacat acatgc
62 <210> SEQ ID NO: 2
63 <211> LENGTH: 521
64 <212> TYPE: PRT
65 <213> ORGANISM: Glycine max
67 <400> SEQUENCE: 2
68 Met Leu Glu Leu Ala Leu Gly Leu Phe Val Leu Ala Leu Phe Leu
                     5
                                    . 10
71 His Leu Arg Pro Thr Pro Ser Ala Lys Ser Lys Ala Leu Arg His Leu
74 Pro Asn Pro Pro Ser Pro Lys Pro Arg Leu Pro Phe Ile Gly His Leu
77 His Leu Leu Lys Asp Lys Leu Leu His Tyr Ala Leu Ile Asp Leu Ser
                            55
80 Lys Lys His Gly Pro Leu Phe Ser Leu Ser Phe Gly Ser Met Pro Thr
83 Val Val Ala Ser Thr Pro Glu Leu Phe Lys Leu Phe Leu Gln Thr His
                    85
                                        90
86 Glu Ala Thr Ser Phe Asn Thr Arg Phe Gln Thr Ser Ala Ile Arg Arg
               100
                                   105
89 Leu Thr Tyr Asp Asn Ser Val Ala Met Val Pro Phe Gly Pro Tyr Trp
                                                   125
          115
                               120
92 Lys Phe Val Arg Lys Leu Ile Met Asn Asp Leu Leu Asn Ala Thr Thr
                           135
                                               140
95 Val Asn Lys Leu Arg Pro Leu Arg Thr Gln Gln Ile Arg Lys Phe Leu
                       150
98 Arg Val Met Ala Gln Ser Ala Glu Ala Gln Lys Pro Leu Asp Val Thr
                                       170
                                                           175
                   165
101 Glu Glu Leu Leu Lys Trp Thr Asn Ser Thr Ile Ser Met Met Leu
                                    185
                180
104 Gly Glu Ala Glu Glu Ile Arg Asp Ile Ala Arg Glu Val Leu Lys Ile
                                                    205
105
           195
                                200
107 Phe Gly Glu Tyr Ser Leu Thr Asp Phe Ile Trp Pro Leu Lys Tyr Leu
                            215
110 Lys Val Gly Lys Tyr Glu Lys Arg Ile Asp Asp Ile Leu Asn Lys Phe
                                            235
                        230
113 Asp Pro Val Val Glu Arg Val Ile Lys Lys Arg Arg Glu Ile Val Arg
                                        250
                    245
116 Arg Arg Lys Asn Gly Glu Val Val Glu Gly Glu Ala Ser Gly Val Phe
117
                                    265
119 Leu Asp Thr Leu Leu Glu Phe Ala Glu Asp Glu Thr Met Glu Ile Lys
                                280
                                                    285
            275
122 Ile Thr Lys Glu Gln Ile Lys Gly Leu Val Val Asp Phe Phe Ser Ala
                            295
125 Gly Thr Asp Ser Thr Ala Val Ala Thr Glu Trp Ala Leu Ala Glu Leu
                                            315
                        310
128 Ile Asn Asn Pro Arg Val Leu Gln Lys Ala Arg Glu Glu Val Tyr Ser
                    325
                                        330
131 Val Val Gly Lys Asp Arg Leu Val Asp Glu Val Asp Thr Gln Asn Leu
```

Input Set : A:\Pto.amc

Output Set: N:\CRF3\07192001\1857581.raw

```
340
                                    345
                                                        350
132
134 Pro Tyr Ile Arg Ala Ile Val Lys Glu Thr Phe Arg Met His Pro Pro
                             360
                                                    365
137 Leu Pro Val Val Lys Arg Lys Cys Thr Glu Glu Cys Glu Ile Asn Gly
    370
                            375
140 Tyr Val Ile Pro Glu Gly Ala Leu Val Leu Phe Asn Val Trp Gln Val
                        390
                                            395
143 Gly Arg Asp Pro Lys Tyr Trp Asp Arg Pro Ser Glu Phe Arg Pro Glu
                   405
                                        410
146 Arg Phe Leu Glu Thr Gly Ala Glu Gly Glu Ala Gly Pro Leu Asp Leu
                                    425
147
                420
149 Arg Gly Gln His Phe Gln Leu Leu Pro Phe Gly Ser Gly Arg Arg Met
150
                                440
152 Cys Pro Gly Val Asn Leu Ala Thr Ser Gly Met Ala Thr Leu Leu Ala
                            455
155 Ser Leu Ile Gln Cys Phe Asp Leu Gln Val Leu Gly Pro Gln Gly Gln
                        470
                                            475
158 Ile Leu Lys Gly Asp Asp Ala Lys Val Ser Met Glu Glu Arg Ala Gly
                                      490
                   485
161 Leu Thr Val Pro Arg Ala His Ser Leu Val Cys Val Pro Leu Ala Arg
               500
                                    505
                                                        510
164 Ile Gly Val Ala Ser Lys Leu Leu Ser
           515
167 <210> SEQ ID NO: 3
168 <211> LENGTH: 27
169 <212> TYPE: DNA
170 <213> ORGANISM: Artificial Sequence
172 <220> FEATURE:
173 <223> OTHER INFORMATION: Description of Artificial Sequence: Oligonucleotide
175 <400> SEQUENCE: 3
                                                                         27
176 cgggatccat gcaaccggaa accgtcg
178 <210> SEQ ID NO: 4
179 <211> LENGTH: 32
180 <212> TYPE: DNA
181 <213> ORGANISM: Artificial Sequence
183 <220> FEATURE:
184 <223> OTHER INFORMATION: Description of Artificial Sequence: Oligonucleotide
186 <400> SEQUENCE: 4
                                                                         32
187 ccqqaattct caccaaacat cacggaggta tc
189 <210> SEQ ID NO: 5
190 <211> LENGTH: 47
191 <212> TYPE: DNA
192 <213> ORGANISM: Artificial Sequence
194 <220> FEATURE:
195 <223> OTHER INFORMATION: Description of Artificial Sequence: Oligonucleotide
197 <400> SEQUENCE: 5
                                                                         47
198 tcaaggagaa aaaaccccgg atccatgttg ctggaacttg cacttgg
200 <210> SEQ ID NO: 6
201 <211> LENGTH: 35
```

Input Set : A:\Pto.amc

Output Set: N:\CRF3\07192001\1857581.raw

```
202 <212> TYPE: DNA
203 <213> ORGANISM: Artificial Sequence
205 <220> FEATURE:
206 <223> OTHER INFORMATION: Description of Artificial Sequence: Oligonucleotide
208 <400> SEQUENCE: 6
209 ggccagtgaa ttgtaatacg actcactata gggcg
                                                                        35
211 <210> SEQ ID NO: 7
212 <211> LENGTH: 24
213 <212> TYPE: DNA
214 <213> ORGANISM: Artificial Sequence
216 <220> FEATURE:
217 <223> OTHER INFORMATION: Description of Artificial Sequence: PCR primer
219 <400> SEQUENCE: 7
                                                                       24
220 aaaattagcc tcacaaaagc aaag
222 <210> SEQ ID NO: 8
223 <211> LENGTH: 27
224 <212> TYPE: DNA
225 <213> ORGANISM: Artificial Sequence
227 <220> FEATURE:
228 <223> OTHER INFORMATION: Description of Artificial Sequence: PCR primer
230 <400> SEQUENCE: 8
                                                                          27
231 atataaggat tgatagttta tagtagg
233 <210> SEO ID NO: 9
234 <211> LENGTH: 1824
235 <212> TYPE: DNA
236 <213> ORGANISM: Glycine max
238 <400> SEQUENCE: 9
                                                                      60
239 ggaaaattag cctcacaaaa gcaaagatca aacaaaccaa ggacgagaac acgatgttgc
240 ttgaacttgc acttggttta ttggttttgg ctctgtttct gcacttgcgt cccacaccca
                                                                     120
241 ctgcaaaatc aaaagcactt cgccatctcc caaacccacc aagcccaaag cctcgtcttc
                                                                    180
242 ccttcatagg acacettcat etettaaaag acaaaettet eeactaegea eteategaee 240
                                                                     300
243 tetecaaaaa acatqqteee ttattetete tetaetttgg etecatgeea acegttgttg
244 cetecacace agaattqtte aagetettee tecaaaegea egaggeaaet teetteaaea
                                                                     360
                                                                     420
245 caaggttcca aacctcagcc ataagacgcc tcacctatga tagctcagtg gccatggttc
                                                                     480
246 ccttcggacc ttactggaag ttcgtgagga agctcatcat gaacgacctt cccaacgcca
247 ccactgtaaa caagttgagg cctttgagga cccaacagac ccgcaagttc cttagggtta
600
249 ccaacaqcac catctccatg atgatgctcg gcgaggctga ggagatcaga gacatcgctc
                                                                     660
250 gcgaggttct taagatcttt ggcgaataca gcctcactga cttcatctgg ccattgaagc
                                                                     720
251 atctcaaggt tggaaagtat gagaagagga tcgacgacat cttgaacaag ttcgaccctg
                                                                     780
                                                                     840
252 tcgttgaaag ggtcatcaag aagcgccgtg agatcgtgag gaggagaaag aacggagagg
253 ttgttgaggg tgaggtcagc ggggttttcc ttgacacttt gcttgaattc gctgaggatg
254 agaccatgga gatcaaaatc accaaggacc acatcgaggg tcttgttgtc gactttttct
255 cggcaggaac agactccaca gcggtggcaa cagagtgggc attggcagaa ctcatcaaca 1020
256 atcctaaggt gttggaaaag gctcgtgagg aggtctacag tgttgtggga aaggacagac 1080
257 ttgtggacga agttgacact caaaaccttc cttacattag agcaatcgtg aaggagacat 1140
258 tecgeatgea eccgeeacte ceagtggtea aaagaaagtg cacagaagag tgtgagatta 1200
259 atggatatgt gatcccagag ggagcattga ttctcttcaa tgtatggcaa gtaggaagag 1260
```

260 accccaaata ctgggacaga ccatcggagt tccgtcctga gaggttccta gagacagggg 1320

Input Set : A:\Pto.amc

Output Set: N:\CRF3\07192001\1857581.raw

```
261 ctgaagggga agcagggcct cttgatctta ggggacaaca ttttcaactt ctcccatttg 1380
262 ggtctgggag gagaatgtgc cctggagtca atctggctac ttcgggaatg gcaacacttc 1440
263 ttgcatctct tattcagtgc ttcgacttgc aagtgctggg tccacaagga cagatattga 1500
264 agggtggtga cgccaaagtt agcatggaag agagagccgg cctcactgtt ccaagggcac 1560
265 atagtettgt etgtgtteea ettgeaagga teggegttge atetaaacte etttettaat 1620
266 taagatcatc atcatatata atatttactt tttgtgtgtt gataatcatc atttcaataa 1680
267 ggtctcgttc atctactttt tatgaagtat ataagccctt ccatgcacat tgtatcatct 1740
268 cccatttgtc ttcgtttgct acctaaggca atcttttttt ttttagaatc acatcatcct 1800
269 actataaact atcaatcctt atat
271 <210> SEQ ID NO: 10
272 <211> LENGTH: 521
273 <212> TYPE: PRT
274 <213> ORGANISM: Glycine max
276 <400> SEQUENCE: 10
277 Met Leu Leu Glu Leu Ala Leu Gly Leu Leu Val Leu Ala Leu Phe Leu
280 His Leu Arg Pro Thr Pro Thr Ala Lys Ser Lys Ala Leu Arg His Leu
281
                  20
                                       25
283 Pro Asn Pro Pro Ser Pro Lys Pro Arg Leu Pro Phe Ile Gly His Leu
284
              35
                                   40
                                                        45
286 His Leu Leu Lys Asp Lys Leu Leu His Tyr Ala Leu Ile Asp Leu Ser
                               55
289 Lys Lys His Gly Pro Leu Phe Ser Leu Tyr Phe Gly Ser Met Pro Thr
                                                75
290
    65
                          70
292 Val Val Ala Ser Thr Pro Glu Leu Phe Lys Leu Phe Leu Gln Thr His
293
                      85
295 Glu Ala Thr Ser Phe Asn Thr Arg Phe Gln Thr Ser Ala Ile Arg Arg
296
                                      105
                                                            110
                 100
298 Leu Thr Tyr Asp Ser Ser Val Ala Met Val Pro Phe Gly Pro Tyr Trp
                                  120
                                                       125
299
            115
301 Lys Phe Val Arg Lys Leu Ile Met Asn Asp Leu Pro Asn Ala Thr Thr
        130
                              135
                                                   140
304 Val Asn Lys Leu Arg Pro Leu Arg Thr Gln Gln Thr Arg Lys Phe Leu
                         150
                                               155
                                                                    160
305 145
307 Arg Val Met Ala Gln Gly Ala Glu Ala Gln Lys Pro Leu Asp Leu Thr
                                           170
310 Glu Glu Leu Leu Lys Trp Thr Asn Ser Thr Ile Ser Met Met Leu
311
                                      185
313 Gly Glu Ala Glu Glu Ile Arg Asp Ile Ala Arg Glu Val Leu Lys Ile
314
                                  200
             195
316 Phe Gly Glu Tyr Ser Leu Thr Asp Phe Ile Trp Pro Leu Lys His Leu
                                                   220
317
        210
                              215
319 Lys Val Gly Lys Tyr Glu Lys Arg Ile Asp Asp Ile Leu Asn Lys Phe
                          230
                                               235
320 225
322 Asp Pro Val Val Glu Arg Val Ile Lys Lys Arg Arg Glu Ile Val Arg
                                           250
323
                     245
325 Arg Arg Lys Asn Gly Glu Val Val Glu Gly Glu Val Ser Gly Val Phe
                                      265
326
                 260
328 Leu Asp Thr Leu Leu Glu Phe Ala Glu Asp Glustiffer Met Glu Ile Lys Use of n and/or Xaa has been detected in the Sequence Listing to insure a corresponding
```



Use of n and/or Xaa has been detected in the sequence Review the Sequence Listing to insure a corresponding explanation is presented in the <220> to <223> fields of each sequence using n or Xaa.

## VERIFICATION SUMMARY DATE: 07/19/2001 PATENT APPLICATION: US/09/857,581 TIME: 08:11:11

Input Set : A:\Pto.amc

Output Set: N:\CRF3\07192001\1857581.raw

```
L:9 M:270 C: Current Application Number differs, Replaced Application Number
L:10 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:3373 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66
L:3376 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66
L:3379 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66
L:3382 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66
L:3385 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66
L:3388 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66
L:3391 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66
L:3394 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66
L:3397 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66
L\!:\!3400~M\!:\!341~W\!: (46) "n" or "Xaa" used, for SEQ ID#:66
L:3403 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66
L:3406 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66
L:3412 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66
L:3418 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66
L:3421 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66
L:3424 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66
L:3427 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66
L:3430 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66
L:3433 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66
L:3436 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66
L:3442 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66
L:3445 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66
L:3448 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66
L:3451 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66
L:3454 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66
L:3457 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66
L:3463 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66
```

PCT09

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/857,581

DATE: 06/27/2001 TIME: 15:07:36 Does Not Comply Corrected Diskette Needed

Input Set : A:\BB1339 PCT Seq Listing.txt Output Set: N:\CRF3\06272001\1857581.raw

3 <110> APPLICANT: E. I. du Pont de Nemours and Company

a tang ana at tang menang ter

- 5 <120> TITLE OF INVENTION: Nucleic Acid Sequences Encoding Isoflavone Synthase
- 7 <130> FILE REFERENCE: BB1339 PCT
- C--> 9 <140> CURRENT APPLICATION NUMBER: US/09/857,581
- C--> 10 <141> CURRENT FILING DATE: 2001-06-05
  - 12 <150> PRIOR APPLICATION NUMBER: 60/117,769
  - 13 <151> PRIOR FILING DATE: 1999-01-27
  - 15 <150> PRIOR APPLICATION NUMBER: 60/144,783
  - 16 <151> PRIOR FILING DATE: 1999-07-20
  - 18 <150> PRIOR APPLICATION NUMBER: 60/156,094
  - 19 <151> PRIOR FILING DATE: 1999-09-24
  - 21 <160> NUMBER OF SEQ ID NOS: 66
  - 23 <170> SOFTWARE: Microsoft Office 97

## ERRORED SEQUENCES

- 2554 <210> SEQ ID NO: 55
- 2555 <211> LENGTH: 499
- 2556 <212> TYPE: PRT
- 2557 <213> ORGANISM: Lupinus albus
- E--> 2559 <400> SEQUENCE: (49) 55
  - 2560 Phe Leu His Leu Arg Pro Thr Pro Thr Ala Lys Ser Lys Ala Leu Arg 2561
  - 2563 His Leu Pro Asn Pro Pro Ser Pro Lys Pro Arg Leu Pro Phe Ile Gly
  - 20 25
  - 2566 His Leu His Leu Leu Lys Asp Lys Leu Leu His Tyr Ala Leu Ile Asp 40
  - 2569 Leu Ser Lys Lys His Gly Pro Leu Phe Ser Leu Tyr Phe Gly Ser Met
  - 55
  - 2572 Pro Thr Val Val Ala Ser Thr Pro Glu Leu Phe Lys Leu Phe Leu Gln
  - 70
  - 2575 Thr His Glu Ala Thr Ser Phe Asn Thr Arg Phe Gln Thr Ser Ala Ile
  - 2576 85 90
  - 2578 Arg Arg Leu Thr Tyr Asp Ser Ser Val Ala Arg Val Pro Phe Gly Pro 100 105
  - 2581 Tyr Trp Lys Phe Val Arg Lys Leu Ile Met Asn Asp Leu Leu Asn Ala
  - 2582 115 120 125
  - 2584 Thr Thr Val Asn Lys Leu Arg Pro Leu Arg Thr Gln Gln Ile Arg Lys

  - 130 135 140

  - 2587 Phe Leu Arg Val Met Ala Gln Gly Ala Glu Ala Gln Lys Pro Leu Asp 2588 145 150 155
  - 2590 Leu Thr Glu Glu Leu Leu Lys Trp Thr Asn Ser Thr Ile Ser Met Met 165 170
  - 2593 Met Leu Gly Glu Ala Glu Glu Ile Arg Asp Ile Ala Arg Glu Val Leu
  - 2594 185
  - 2596 Lys Ile Phe Gly Glu Tyr Ser Leu Thr Asp Phe Ile Trp Pro Leu Lys

Input Set : A:\BB1339 PCT Seq Listing.txt
Output Set: N:\CRF3\06272001\I857581.raw

2597			195					200					205			
2599	His	Leu	Lys	Val	Gly	Lys	Tyr	Glu	Lys	Arg	Ile	Asp	Asp	Ile	Leu	Asn
2600		210	-		_	_	215					220				
2602	Lys	Phe	Asp	Pro	Val	Val	Glu	Arg	Val	Ile	Lys	Lys	Arg	Arg	Glu	Ile
2603	225		_			230					235					240
2605	Val	Arg	Arg	Arg	Lys	Asn	Gly	Glu	Val	Val	Glu	Gly	Glu	Val	Ser	Gly
2606					245					250					255	
2608	Val	Leu	Leu	Asp	Thr	Leu	Leu	Glu	Phe	Ala	Glu	Asp	Glu	Thr	Met	Glu
2609				260					265					270		
2611	Ile	Lys	Ile	Thr	Lys	Asp	His	Ile	Lys	Gly	Leu	Val	Val	Asp	Phe	Phe
2612			275					280					285			
2614	Ser	Ala	Gly	Thr	Asp	Ser	Thr	Ala	Val	Ala	Thr	Glu	Trp	Ala	Leu	Ala
2615		290					295					300				٠.
2617	Glu	Leu	Ile	Asn	Asn	Pro	Lys	Val	Leu	Glu	Arg	Ala	Arg	Glu	Glu	Val
2618	305		•			310					315					320
2620	Tyr	Ser	Val	Val	_	Lys	Asp	Arg	Leu		Asp	Glu	Val	Asp		Gln
2621					325					330					335	
2623	Asn	Leu	Pro	Tyr	Ile	Arg	Ala	Ile	Val	Lys	Glu	Thr	Phe	_	Met	His
2624				340					345					350		
2626	Pro	Pro	Leu	Pro	Val	Val	Lys	_	Lys	Cys	Thr	Glu	Glu	Cys	Glu	Ile
2627			355					360					365			
2629	Asn	Gly	Tyr	Val	Ile	Pro	Glu	Gly	Ala	Leu	Ile		Phe	Asn	Val	Trp
2630		370					375					380				
2632		Val	Gly	Arg	Asp		Lys	Tyr	Trp	Asp	-	Pro	Ser	Glu	Phe	
2633						390					395					400
2635	Pro	Glu	Arg	Phe		Glu	Thr	Glu	Ala		Gly	Glu	Ala	Arg		Leu
2636					405					410			_		415	
2638	Asp	Leu	Arg	_	Gln	His	Phe	Gln		Leu	Pro	Phe	Gly		Gly	Arg
2639				420	_		_		425			_		430	_	
2641	Arg	Met	_	Pro	Gly	Val	Ile		Ala	Thr	Ser	Gly		Ala	Thr	Leu
2642		_	435		_	_		440				_	445		_	
2644	Leu		Ser	Leu	Ile	Gln	-	Phe	Asp	Leu,	Gln		Leu	Gly	Pro	GIn
2645	_	450	_				455		_		<b>.</b>	460				_
2647	_	Gln	Ile	Leu	Lys	_	Gly	Asp	Ala	Lys		Ser	Met	GLu	Glu	
2648		_				470		_			475		_			480
2650	Ala	GLY	Leu	Thr		Pro	Arg	Ala	His		Leu	Val	Cys	val		Leu
2651		_			485					490					495	
2653	Ala	Arg	Ile													

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/857,581

DATE: 06/27/2001 TIME: 15:07:38

Input Set : A:\BB1339 PCT Seq Listing.txt
Output Set: N:\CRF3\06272001\1857581.raw

L:9 M:270 C: Current Application Number differs, Replaced Application Number L:10 M:271 C: Current Filing Date differs, Replaced Current Filing Date L:2559 M:212 E: (34) Invalid or duplicate Sequence ID Number, SEQUENCE ID NOS:55 differs:49 L:3373 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66 L:3376 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66 L:3379 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66 L:3382 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66 L:3385 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66 L:3388 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66 L:3391 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66 L:3394 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66 L:3397 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66 L:3400 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66 L:3403 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66 L:3406 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66 L:3412 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66 L:3418 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66 L:3421 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66  $L\!:\!3424$  M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66  $L\!:\!3427$  M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66 L:3430 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66 L:3433 M:341 W: (46) "n" or "Xaa" used, for SEQ ID\$\$#:66\$L:3436 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66 L:3442 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66 L:3445 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66 L:3448 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66 L:3451 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66 L:3454 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66 L:3457 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66 L:3463 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66